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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,611	06/28/2001	Hemant M. Chaskar	05288.00010	4861

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WASHINGTON, DC 20001

EXAMINER

BLAIR, DOUGLAS B

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/892,611

Applicant(s)

CHASKAR ET AL.

Examiner

Douglas B. Blair

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Claims 1-45 are currently pending in this application.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,654,359 to La Porta et al. in view of U.S. Patent Number 6,360,264 to Rom.
4. As to claim 10, La Porta teaches a method of facilitating a mobile Internet Protocol (IP) handoff from a source access router to one of a plurality of potential target access routers, the method comprising the steps of: detecting entry into an area served by two or more of the plurality of potential target access routers (col. 14, line 39-col. 16, line 8); and transmitting an address of the source access router from the mobile terminal to one or more of the potential target access routers (col. 14, line 39-col. 16, line 8); however La Porta does not explicitly teach performing an IP handoff operation from the source access router to one of the plurality of potential target access routers on the basis of capability information received from one or more of the plurality of potential target access routers.

Art Unit: 2142

Rom teaches performing an IP handoff operation from the source access router to one of the plurality of potential target access routers on the basis of capability information received from one or more of the plurality of potential target access routers (col. 4, lines 4-23).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of La Porta regarding the handoff of a device with the teachings of Rom regarding picking an access point based on capabilities because such a choice ensures better quality of services for an access point user (Rom, col. 4, lines 4-23).

5. As to claim 11, Rom teaches the method of claim 10, wherein step (3) is performed in the mobile terminal by selecting a target access router on the basis of bandwidth capabilities required by the mobile terminal (col. 4, lines 4-23).

6. As to claim 12, La Porta the method of claim 10, wherein step (3) is performed by the source access router on the basis of capability information received by the source access router from the one or more plurality of potential target access routers (col. 14, line 39-col. 16, line 8).

7. As to claim 13, Rom teaches the method of claim 10, wherein step (3) comprises the step of performing the IP handoff to one of the plurality of potential target access routers that best matches capabilities required by the mobile terminal (col. 4, lines 4-23).

8. As to claim 14, La Porta teaches the method of claim 10, wherein step (3) is performed independently of any voice-channel handoff operation that is also supported by the mobile terminal (col. 14, line 39-col. 16, line 8).

9. As to claim 15, La Porta method for making handoff decisions among access routers, comprising the steps of: detecting a condition that a mobile terminal presently served by a first access router is entering an area served by a second access router (col. 14, line 39-col. 16, line 8);

Art Unit: 2142

transmitting a network address of the first access router from the mobile terminal to the second access router (col. 14, line 39-col. 16, line 8); however La Porta does not explicitly teach exchanging capability information between the first access router and the second access router, such that each access router learns capabilities of the other access router.

Rom teaches exchanging capability information between the first access router and the second access router, such that each access router learns capabilities of the other access router (col. 4, lines 4-23).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of La Porta regarding the handoff of a device with the teachings of Rom regarding exchanging capability information because exchanging information ensures better quality of services for an access point user (Rom, col. 4, lines 4-23).

10. As to claim 16, Rom teaches the method of claim 15, further comprising the step of: (4) using the exchanged capability information from step (3) to make a handoff decision for a mobile IP terminal (col. 4, lines 4-23).

11. As to claim 17, La Porta teaches the method of claim 15, wherein step (3) is performed by transmitting an IP packet from the second access router to the first access router requesting capability information and receiving an IP packet from the first access router containing capability information describing capabilities of the first access router (col. 14, line 39-col. 16, line 8).

12. As to claim 18, Rom teaches the method of claim 15, wherein the capability information comprises a bandwidth supported by one of the routers (col. 4, lines 4-23).

Art Unit: 2142

13. As to claim 19, Rom teaches the method of claim 15, wherein the capability information comprises dynamic loading conditions associated with one of the routers (col. 4, lines 4-23).

14. As to claim 20, Rom teaches the method of claim 15, wherein the capability information comprises security schemes supported by one of the routers (col. 4, lines 4-23).

15. As to claim 21, La Porta teaches the method of claim 15, wherein the capability information comprises the geographic location of one of the access routers (col. 14, line 39-col. 16, line 8).

16. As to claim 22, La Porta teaches the method of claim 15, wherein the capability information comprises signal transmission technologies supported by a base station associated with one of the access routers (col. 14, line 39-col. 16, line 8).

17. As to claim 23, Rom teaches the method of claim 15, wherein the capability information comprises a cost of access using one of the access routers (col. 4, lines 4-23).

18. As to claim 24, Rom teaches the method of claim 15, wherein step (1) comprises the step of detecting a condition that the mobile terminal is entering an area served by at least two potential target access routers, wherein step (3) comprises the step of exchanging information concerning both of the at least two potential target access routers (col. 4, lines 4-23); and further including the step of selecting one of at least two potential target access routers on the basis of the capability information exchanged in step 3 (col. 4, lines 4-23).

19. As to claim 25, La Porta teaches the method of claim 15, further comprising the step of: purging capability information of the first access router if no handoffs from the first access router have been detected within a predetermined time period (col. 14, line 39-col. 16, line 8).

Art Unit: 2142

20. As to claim 26, La Porta teaches the method of claim 16, wherein step (4) comprises the step of selecting an optimum target router on the basis of a predetermined policy (col. 14, line 39-col. 16, line 8).

21. As to claim 27, Rom teaches the method of claim 26, wherein the policy specifies that a lowest cost access router should be selected (col. 4, lines 4-23).

22. As to claim 28, Rom teaches the method of claim 15, further comprising the step of: redirecting one or more mobile terminals away from a loaded access router to a less loaded access router on the basis of capability information obtained as a result of step (3) (col. 4, lines 4-23).

23. As to claim 29, Rom teaches the method of claim 15, wherein step (1) comprises the step of detecting that the mobile terminal is entering an area served by at least two potential target access routers, and further comprising the step of: selecting one of the two potential target access routers on the basis of a best match between a capability dictated by an application program executing on the mobile terminal and the capabilities of the two potential target access routers (col. 4, lines 4-23).

24. As to claims 30-34, they feature limitations found in claims 15-29 and are rejected for the same reasons as claims 15-29.

25. As to claims 35-38, they feature limitations found in claims 15-29 and are rejected for the same reasons as claims 15-29.

26. As to claims 39-45, they feature limitations found in claims 15-29 and are rejected for the same reasons as claims 15-29.

***Response to Arguments***

Applicant's arguments filed 6/28/2005 have been fully considered but they are not persuasive. The applicant argues the following points: a) Rom does not use access routers, but instead uses access points in an entirely different type of wireless network; b) There is no expectation of using La Porta to arrive at the present invention because La Porta uses the HAWII protocol and the present application is silent to that; c) La Porta nor Rom do not teach or suggest "finding an optimal access router to receive the handoff operation for the mobile terminal by evaluating capability information for a plurality of access routers"; d) La Porta nor Rom do not teach or suggest "a capabilities storage area reflecting capabilities needed by the mobile terminal, wherein the mobile IP handoff processing circuit transmits one or more capabilities stored in the capabilities storage area"; and e) the previous office action did not address the limitation of a capabilities map as claimed in claim 39.

As to point a), by using the definitions provided by the applicant, an Access Point must have inherent basic routing protocols, otherwise it would be useless for connecting a user to a wireless LAN. The applicant's arguments do not point out any functional differences between the Access Router claimed in the present invention and the Access Point taught by Rom.

As to point b), the applicant has not pointed out in the claim language where the claimed invention would exclude the use of networks using the HAWAII protocol.

As to point c), the cited portion of Rom states that "the determination of which AP is to be associated with a particular node is based upon criteria such as the quality of signal transmitted between the node and the AP and the load carried by the AP". In other words, the



Art Unit: 2142

determination of which Access Point to use during a hand off is based on the capabilities of signal strength and load carried.

As to point d), the cited portion of Rom discusses the use of the capabilities information when determining which access point to use. Therefore this information must be stored in the system taught by Rom.

As to point e), claim 39 merely claims "a capabilities map that defines capabilities of geographically proximate routers", which would be present in any wireless system with multiple access points/routers. As discussed before, Rom teaches a determination of which Access Point to use during a hand off is based on the capabilities of signal strength and load carried, therefore Rom inherent stores such information in some form of capabilities map before making a decision.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2142

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas B. Blair whose telephone number is 571-272-3893. The examiner can normally be reached on 8:30am-5pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Douglas Blair

DBB



**ANDREW CALDWELL**  
**SUPERVISORY PATENT EXAMINER**